

Nature Conservation Strategies

- Environmental laws, regulations and standards
- environmental considerations into land and natural resource planning
- incentives for voluntary participation in conservation efforts on private land
- changes in individual behaviour
- Protected areas

United Nations Convention on Biological Diversity

Canadian Biodiversity Strategy

“A society that lives and develops as part of nature, values the diversity of life, takes no more than can be replenished and leaves to future generations a nurturing and dynamic world, rich in biodiversity.”

Article 8. In-situ Conservation

Each Contracting Party shall, as far as possible and as appropriate:

- (a) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;
- (b) Develop, where necessary, guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;

Protected Areas as a Successful Conservation Tool - North America

- 7807 plants, 233 mammals, 160 birds endemic to North America (CEC on Track - 1999)
- 1970 to 2000 in North America
 - 800 to 3000 IUCN class 1-V sites
 - 100 to 250 million ha - 9% of North America
 - Class 1-3 - 5.7% of North America

A critique of Protected Areas

- Too small, don't work, lose species, don't account for dynamics
- Science for PA's is weak and biased
- Need to actively manage, interfere anyway
- Over-marketed, overrun
- Move to sustainable development areas
 - Floating reserves

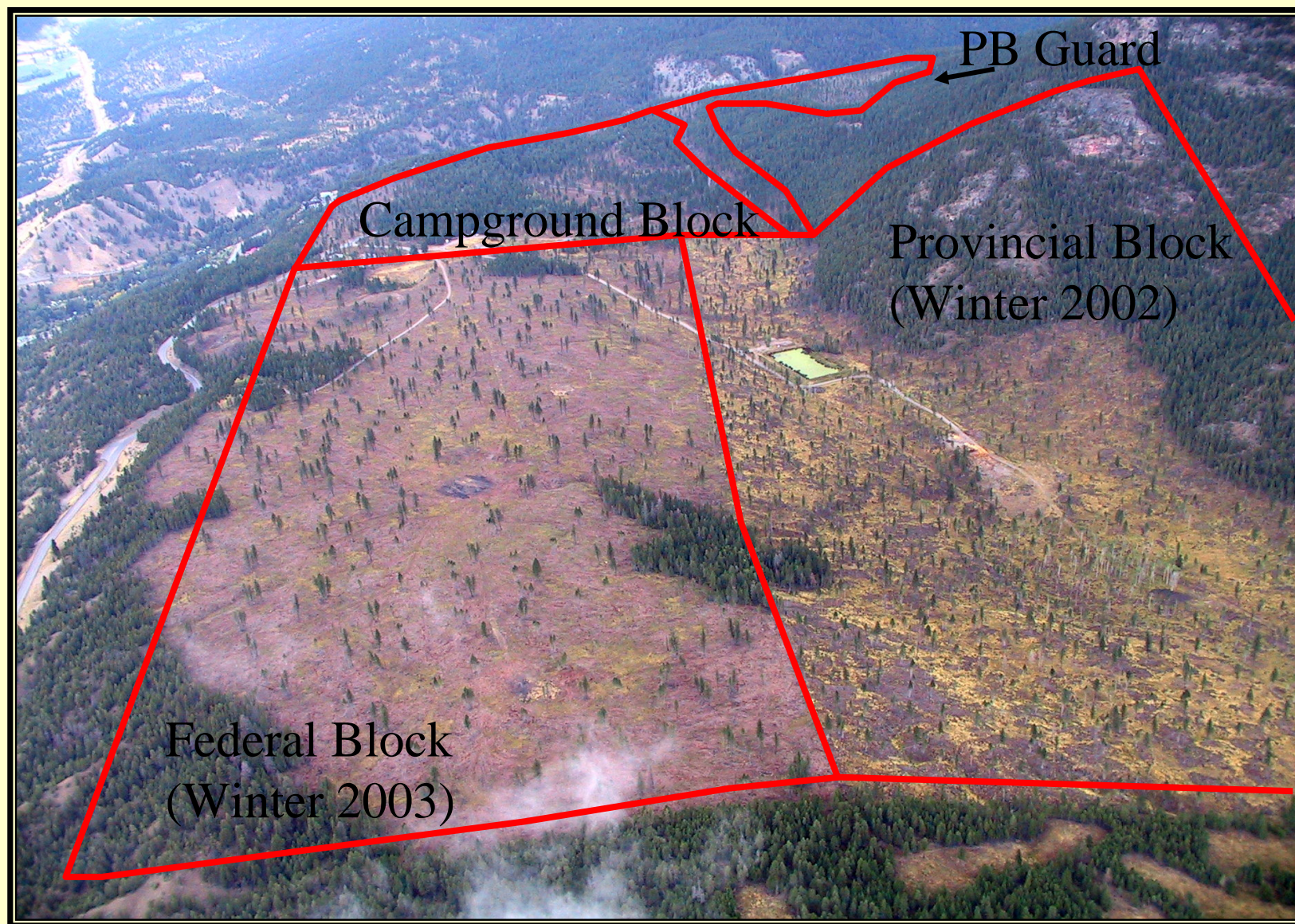
When Required - Active Management Really???

- Restoration – species, community, ecosystem
- Population control
- Exotic species removal
- Wildlife harvest management
- Process management – fire, insects

Elk population control in the absence of predators - EINP

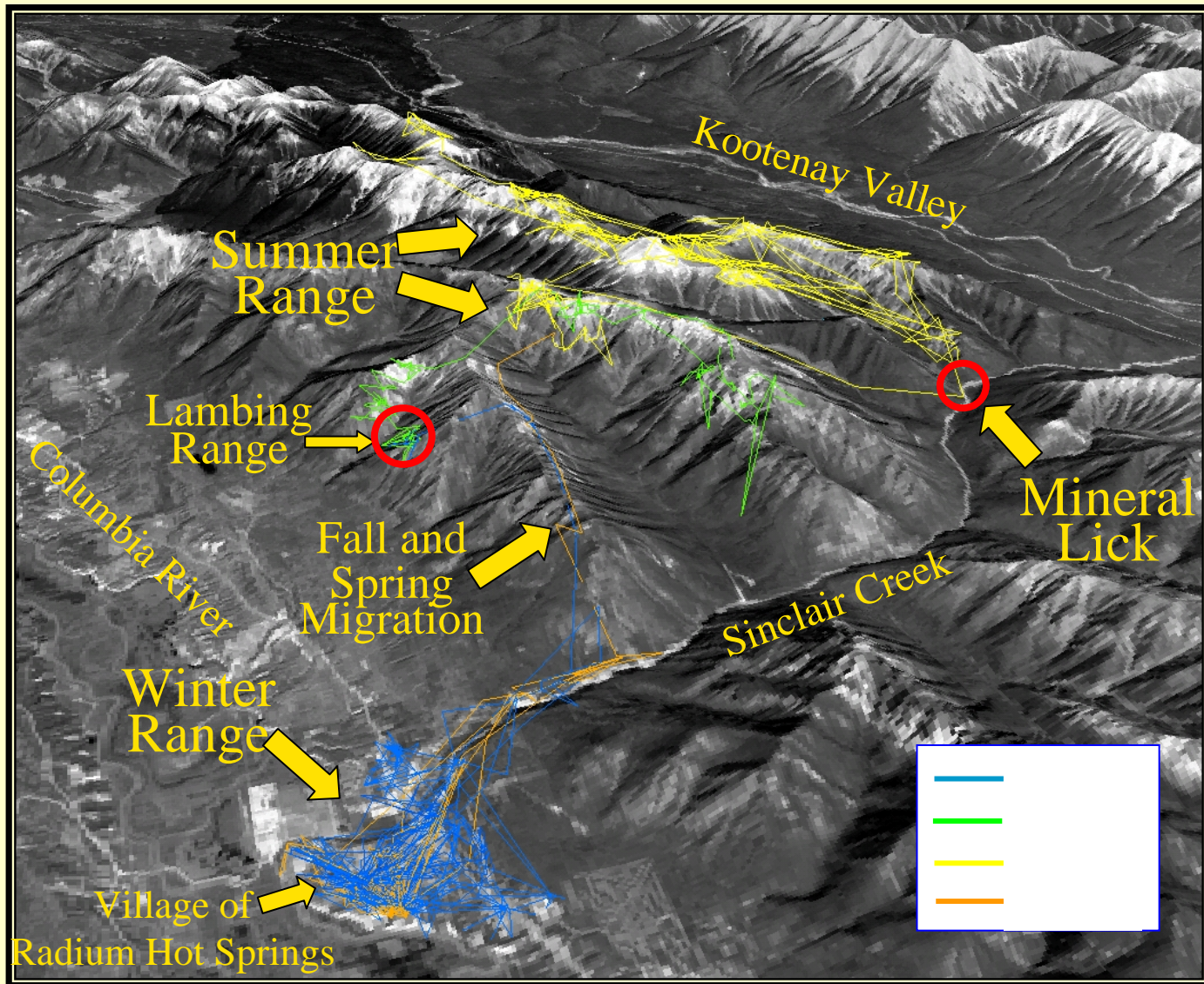






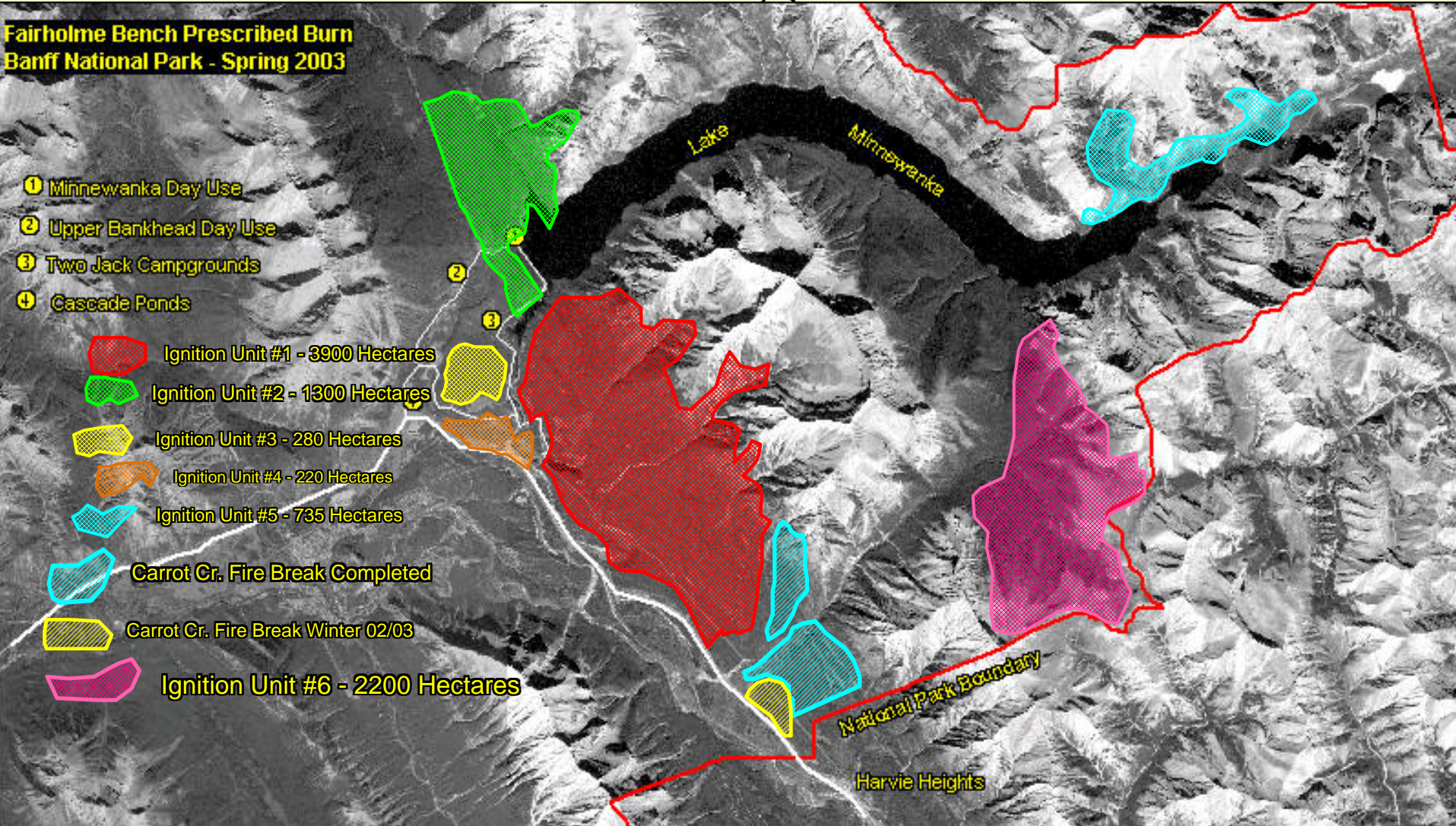
Photograph from September 11, 2003 showing Redstreak restoration areas.

Radio-Telemetry Results



Firebreak and Ignition Units

**Fairholme Bench Prescribed Burn
Banff National Park - Spring 2003**



Monitoring for Ecological Integrity

- Suite of indicators that are sensitive to stress
- Structure and function at a range of scales
- Indicator species sensitive to range of disturbances
 - k selected, habitat specialists, large-bodied, bio-accumulators
- Integrate abundance and trophic structure

Need To Answer

- What is the state of ecological integrity – health – condition?
- What is the effectiveness of our management actions?

Answers to the Questions Must

- Connect to management
- Be part of a long-term program that is reliable and defensible
- Be cost reasonable